

EUROPEAN PATENT OFFICE

Patent Abstracts of Japan

PUBLICATION NUMBER : 03247523
PUBLICATION DATE : 05-11-91

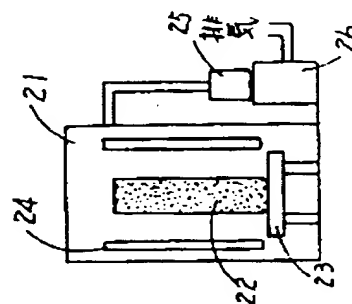
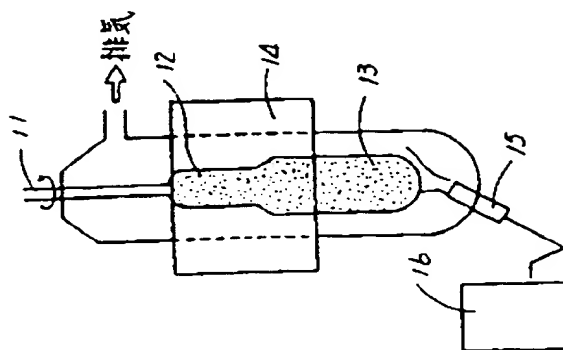
APPLICATION DATE : 26-02-90
APPLICATION NUMBER : 02042478

APPLICANT : ASAHI GLASS CO LTD;

INVENTOR : OTA YUKINORI;

INT.CL. : C03B 19/14 C03B 37/014

TITLE : MANUFACTURE OF SILICA GLASS
AND SILICA GLASS



ABSTRACT : PURPOSE: To reduce the structural defects in silica glass, in the method for converting a porous glass base metal constituted of glass fine particles into a transparent one, by shrinking the base metal under heating at a specified temp. and thereafter converting it into a transparent one in an atmosphere with specified pressure or O₂ partial pressure and temp.

CONSTITUTION: A porous glass base metal 13 obtd. by depositing glass fine particles synthesized by a burner for synthesizing from SiCl₄ is shrunk in an electric furnace 14 at a temp. lower than the one at which it is converted into transparent glass, i.e., 1200 to 1350°C and is discharged as a shrunken base metal 12. Next, the obtd. shrunken base metal 12 is mounted on a stand 23 made of carbon in a carbon electric furnace 21 having a carbon heater 22, a rotary pump 25 and a vacuum pump 26. Then, the shrunken base metal 12 is converted into transparent glass in the furnace 21 in an atmosphere under ≤30Torr pressure or ≤1% O₂ partial pressure at ≥1350°C. By this method, the silica glass having few structural defects and hardly emitting fluorescence even if irradiated with ultraviolet rays having short wave length can be obtd.

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